



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0272; Project Identifier MCAI-2020-01485-T]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-100-1A10 airplanes. This proposed AD was prompted by a report that certain airplanes have navigation units with outdated magnetic variation (MagVar) tables. This proposed AD would require revising the existing airplane flight manual (AFM) and applicable corresponding operational procedures to update the flight management system (FMS) limitations. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0272; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0272; Project Identifier MCAI-2020-01485-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data.

The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-33, dated September 29, 2020 (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to

correct an unsafe condition for certain Bombardier, Inc., Model BD-100-1A10 airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0272.

This proposed AD was prompted by a report that certain airplanes have navigation units with outdated MagVar tables. The FAA is proposing this AD to address outdated MagVar tables inside navigation systems, which can affect the performance of the navigation systems and result in the presentation of misleading magnetic heading references on the primary flight displays (PFDs) and multi-function displays (MFDs), positioning the airplane outside of the terrain and obstacle protection provided by instrument flight procedures and flight route designs, and can lead to significantly inaccurate heading, course, and bearing calculations. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

Bombardier has issued the following service information. This service information describes procedures for revising the existing AFM to update the FMS limitations. These documents are distinct since they apply to different airplane configurations.

- Flight Management System (FMS) limitation in Section 02-04 – Systems Limitations, of Chapter 02 – Limitations, of the Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 58, dated January 15, 2020. (For obtaining the FMS limitation for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.)
- FMS limitation in Section 02-04 – Systems Limitations, of Chapter 02 – Limitations, of the Challenger 300 Airplane Flight Manual (Metric Version), Publication No. CSP 100-1 (Metric), Revision 58, dated January 15, 2020. (For obtaining the FMS

limitation for Bombardier Challenger 300 Airplane Flight Manual (Metric Version), Publication No. CSP 100-1 (Metric), use Document Identification No. CH 300 AFM-M.)

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions specified in the service information already described.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 318 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

| Estimated costs for required actions | | | |
|---------------------------------------|------------|------------------|------------------------|
| Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
| 1 work-hour X \$85 per hour = \$85 | \$0 | \$85 | \$27,030 |

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Bombardier, Inc.: Docket No. FAA-2021-0272; Project Identifier MCAI-2020-01485-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 through 20407 inclusive, equipped with FMC-5000 flight management computers.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by a report that certain airplanes have navigation units with outdated magnetic variation (MagVar) tables. The FAA is issuing this AD to address outdated MagVar tables inside navigation systems, which can affect the performance of the navigation systems and result in the presentation of misleading magnetic heading

references on the primary flight displays (PFDs) and multi-function displays (MFDs), positioning the airplane outside of the terrain and obstacle protection provided by instrument flight procedures and flight route designs, and can lead to significantly inaccurate heading, course, and bearing calculations.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Revision of the Airplane Flight Manual (AFM)

Within 60 days after the effective date of this AD: Revise the existing AFM and applicable corresponding operational procedures to incorporate the information specified in the Flight Management System (FMS) limitation in Section 02-04 – Systems Limitations, of Chapter 02 – Limitations, of the applicable AFM, specified in figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) – AFM Revision

| Bombardier, Inc., Model– | AFM– | Publication No.– | Revision– | Dated– |
|---|---|-----------------------------|------------------|------------------|
| BD-100-1A10 airplanes | Bombardier Challenger 300 Airplane Flight Manual (Imperial Version) ¹ | CSP 100-1 | 58 | January 15, 2020 |
| BD-100-1A10 airplanes | Bombardier Challenger 300 Airplane Flight Manual (Metric Version) ² | CSP 100-1 (Metric) | 58 | January 15, 2020 |
| ¹ For obtaining the FMS limitation for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I. ² For obtaining the FMS limitation for Bombardier Challenger 300 Airplane Flight Manual (Metric Version), Publication No. CSP 100-1 (Metric), use Document Identification No. CH 300 AFM-M. | | | | |

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(i) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-33, dated September 29, 2020, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0272.

(2) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified in this AD, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>. You may view this

service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on April 7, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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